

ARTERY- AND VEIN-SPECIFIC PROTEINS AND USES THEREFOR

ABSTRACT OF THE DISCLOSURE

Arterial and venous endothelial cells are molecularly distinct from the earliest stages of angiogenesis. This
5 distinction is revealed by expression on arterial cells of a transmembrane ligand, called EphrinB2 whose receptor EphB4 is expressed on venous cells. Targeted disruption of the *EphrinB2* gene prevents the remodeling of veins from a capillary plexus into properly branched structures.
10 Moreover, it also disrupts the remodeling of arteries, suggesting that reciprocal interactions between pre-specified arterial and venous endothelial cells are necessary for angiogenesis.

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